Syllabus Last Updated: 2026-10-07

SOC 596A

Global Political Sociology of Science, Knowledge, and Technology

Fall 2026 | Tuesdays & Thursdays 12:30 to 1:45 pm | Social Science Building, Room 415

Description of the Course

This PhD seminar sits at the intersection of the sociology of science, knowledge, and technology (SKAT) and global political sociology. It asks a foundational question: how does scientific knowledge—often claimed as universal—operate as a vector of global power, statecraft, and structural inequality? Beginning with the epistemological debates that gave rise to the sociology of scientific knowledge, the course moves progressively outward to the macro-level structures of the global knowledge order, the professional networks that circulate expertise transnationally, and the shifting centers of gravity in a multipolar world. Students will develop both a theoretical vocabulary for analyzing knowledge-power relations and the analytical writing habits required for future scholarly work.

Instructor & Contact Information

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Course Format and Teaching Methods

SOC 596A is an in-person PhD seminar that meets twice weekly, on Tuesdays and Thursdays, in the Social Sciences Building, Room 415. Designed for the LLM age, the seminar aims to amplify your scholarship rather than replace it with AI. Each session follows a structured three-phase format combining instructor synthesis, an analog analytical writing sprint, and open seminar dialogue, and closes with one instructor-posed Session Question, added to the public Question Bank, and one to three key concepts, added to the public Concept Bank. Attendance and active participation are essential to the design of the course; the format cannot be replicated asynchronously.

Expected Learning Outcomes

By the end of this seminar, students will be able to:

- **Theoretical Foundations:** Demonstrate command of the core theoretical traditions in the sociology of science, knowledge, and technology (SKAT), including social constructivism, actor-network theory, feminist standpoint epistemology, and the Strong Programme.
- **Global Political Analysis:** Apply frameworks from global political sociology and international relations—including world-systems theory, world-society theory, Bourdieusian field theory, and co-production—to analyze the political dimensions of scientific knowledge and technological systems.
- **Critical Analytical Writing:** Produce under timed, analog conditions a clear and well-structured sociological argument that identifies theoretical tensions, decomposes competing claims, and defends an original analytical position.

- **Research Design:** Develop an original, feasible research proposal that is situated in the relevant literature, anchored in an appropriate theoretical framework, and equipped with a defensible methodological approach.
- **Scholarly Communication:** Present original research to a graduate seminar audience with clarity and precision.

Course Philosophy & the Role of AI

In this seminar, we treat writing as a vehicle for thinking. Writing is not about creating perfect text. It is about the struggle, the thinking, and the discovery along the way. At its best, writing is driven by curiosity and connection—it compels us to take risks and think for ourselves. That process is something no AI can replicate.

Part of what makes writing so cognitively demanding—and just plain hard—is that it requires us to manage multiple processes simultaneously: generating ideas, evaluating logic, arranging prose, and articulating arguments. The goalpost moves constantly as we sift through and reformulate topic sentences and paragraphs. This multiprocessing is also what makes writing such a powerful tool for learning.

Large language models (LLMs) like Claude and ChatGPT are revolutionary tools, and you should learn how to use them. They will affect nearly every aspect of our field. However, they cannot generate original critical thoughts, nor can they evaluate and synthesize competing sociological ideas with human rigor. Emerging research underscores this point. A 2025 MIT Media Lab study (Kosmyna et al., "Your Brain on ChatGPT") used EEG neuroimaging to measure cognitive engagement during essay writing across three groups. LLM users, search-engine users, and brain-only writers each completed multiple sessions over four months. The results were striking. Brain connectivity systematically decreased with the level of external tool support, and LLM users showed the weakest neural engagement among the three groups. However, participants who first wrote on their own and were then reassigned to use an LLM exhibited significantly stronger cognitive activation, including higher memory recall, than those who had relied on LLMs from the start. So, doing your own thinking first, then turning to an LLM to polish and refine, preserves the cognitive benefits of writing. Starting with an LLM risks outsourcing the very processes that make writing intellectually productive.

This is the approach we take in SOC 596A. In-class work is analog. We use pen and paper to isolate and practice pure analytical thinking. LLMs may be used outside of class to help polish and articulate your raw ideas for take-home assessments, and you are welcome (and even encouraged) to work with them on your final proposal. But write first, think first. You will learn to use LLMs as a complement to your own thinking rather than a substitute for it, developing a workflow that makes you a sharper scholar who thinks deeply first and uses AI to refine, not replace, that thinking. Our goal in the classroom is to build your cognitive endurance by evaluating alternative ideas, justifying analytical choices, decomposing complex theories, and synthesizing arguments. These are the exact skills required for your comprehensive exams and future scholarship. This workflow is not only encouraged but practiced: the LLM Expansion Memos (see Assessments and Grading) ask you to expand your in-class analog writing with an LLM of your choice three times across the semester.

The Analog Classroom: Device Policy

Because in-class work is analog, the seminar room is device-free: laptops, tablets, phones, and other smart devices are put away for the duration of each session. (I will use my laptop to present slides, but I will not access my smart devices in solidarity with the experience.) Bring printed copies of the

readings or your printed or handwritten notes for discussion; all readings are available on Brightspace for printing.

Three exceptions apply: (1) accommodations documented through the Disability Resource Center, which will always be honored; (2) Module 1-B, held (a)synchronously; and (3) any session activity announced in advance as requiring devices. If you are expecting a genuinely urgent call, step out of the room to take it.

Daily Seminar Format

This class is dedicated to activities and discussion. To foster rigorous, original thinking and ensure every voice is heard, the first portion of each seminar follows a structured, three-phase format:

- **Phase 1, Opening, Synthesis, and Framing (15 min):** The instructor synthesizes, not summarizes, the day's readings, framing the core theoretical tensions and taking clarifying questions.
- **Phase 2, The Analog Analytical Sprint (20 min):** You receive an analytical prompt based on the day's readings. First 5 to 10 minutes: scratchpad (outline, diagram, or map your ideas). Final 10 to 15 minutes: full prose. Graded on the architecture of your ideas, not grammar or spelling. We'll likely focus on single paragraphs early on and then expand to writing more prose later in the semester. All sprints are open-notes. You may use any notes you'd like, so long as they are printed out on paper. You will not able to reference any electronic device. I will no longer provide summaries, but I will continue to print and distribute the slide decks at the start of class for you to take notes on.
- **Phase 3, The "Roulette" Dialogue (40 min):** Round 1 (Uninterrupted Sharing): each person briefly shares their core argument with no interruptions. Round 2 (Open Synthesis): the floor opens for replies, tensions, and new perspectives.
- **The Session Question:** Each session closes with one high-level analytical question, posed by the instructor and printed on the day's slide handout, that captures the session's central tension. The instructor reads it in the final minute of Phase 3 and adds it to the public Question Bank, so each module contributes three questions, one for each of sessions A, B, and C. The same slide names one to three key concepts from the session's readings, which are added to the public Concept Bank. Questions in the bank inspire, but do not directly map onto, the questions on the Comprehension Assessments; the concepts are the terms you will be asked to define on assessment day. The question and the concepts take no separate class time.

Assessments and Grading

In a PhD seminar, an "A" signifies performance at the expected professional standard for a doctoral candidate. To earn an "A," you must successfully complete four core components. Their weights are as follows:

Assessment Weights

Component	Weight	Notes
Comprehension Assessments	30%	Assessment 1: 16.7% (1X - Baseline) Assessment 2: 33.3% (2X) Assessment 3: 50% (3X) *N.B., as shares of this component.* Each assessment scored 0–5
Analog Analytical Writing & Seminar Engagement	30%	15 opportunities, 2 dropped Scored 0–5 per session; (5 = 100, 4 = 95, 3 = 90, 2 = 80, 1 = 70, 0 = 55)
Staged Research Proposal	30%	Final submission & presentation, scored 0–5; 3 ungraded check-ins
LLM Expansion Memos	10%	Three expansion memos (your choice of 3 of the 6 modules) and one feedback memo; Scored 0–5 per memo (same 0–5 scale as the analog sprints)

1. Analog Analytical Writing & Seminar Engagement (30% of Final Grade)

Each session, your analog writing exercise is collected at the end of class and scored on the following 0–5 scale; the percentage equivalent of each score is shown in parentheses. The expected and modal score is a 3, which converts to 90%, so work that consistently meets the expected standard earns an A for this component:

- **5 (100%):** Exceptional analytical work, with ideas that are unusually well-decomposed, evaluated, and justified, and an argument that makes an original connection across the readings. A 5 is rare.
- **4 (95%):** Excellent analytical work that exceeds the expected standard in depth or precision. The argument is clearly decomposed and carefully justified.
- **3 (90%):** The expected standard and the modal score. A clear analytical argument is present, with discernible decomposition of ideas and some evaluation or justification.
- **2 (80%):** Below the expected standard. An argument is present but underdeveloped; the writing contains more summary than analysis.
- **1 (70%):** Well below the expected standard. The writing shows minimal analytical effort, e.g., summary only or fragments without a discernible argument.
- **0 (55%):** Absent, or the work is effectively blank.

Practice Sessions: All three sessions of Module 1 (1-A on August 27, 1-B on September 1, and 1-C on September 3) are practice runs. No grade is recorded for these sessions.

Graded Sessions: Modules 2-A through 6-C provide 15 graded opportunities. Your two lowest scores, including absences, are automatically dropped, leaving 13 sessions that count toward your final participation grade. Your score for this component is the average of the percentage equivalents of your 13 counted session scores, applied to the component's 30% weight (e.g., a 3 in eleven sessions and a 4 in two sessions averages $(11 \times 90 + 2 \times 95) \div 13 \approx 90.8\%$, and $90.8\% \times 30 \approx 27.2$ percentage points of the final grade); the letter grades in the table below are illustrative equivalents.

Analog Writing Grade Thresholds

Grade	Typical Session Scores	Average %	Description
A	Mostly 3s and above	90–100%	Consistently met or exceeded the expected standard.
B	2s mixed with 3s	80–89%	Often below the expected standard, with underdeveloped arguments.
C	Mostly 1s and 2s	70–79%	Mostly summary with minimal analysis across sessions.
D	0s mixed with 1s	60–69%	Minimal analytical effort in most sessions, with absences or blanks.
E	Mostly 0s	< 60%	Largely absent, blank, or without analytical effort.

2. Comprehension Assessments (30% of Final Grade)

Comprehension Assessments in this course are designed to mirror your comprehensive exams.

- **The Question Bank:** The instructor closes each session with one high-level analytical question that captures the day's central tension. These Session Questions form a shared public Question Bank; each module contributes three, one for each of sessions A, B, and C.
- **The Concept Bank:** The same closing slide names one to three key concepts from the session's readings. These form a shared public Concept Bank. On each assessment, you will define two or three concepts drawn from the bank, in a few sentences each, alongside the analytical questions; the definitions are part of the assessment's single 0–5 score.
- **The Assessments:** At the close of each Part, you will sit an in-class assessment. Unlike the analytical sprints, the three assessments remain closed-notes. The only notes that are permitted are this syllabus with the assigned readings for reference. The Question Bank will inspire, but not directly map onto, the questions you see. The Concept Bank supplies the definition items directly.
- **Cumulative Structure and Weighting:** The assessments increase in weight as they cover more material, in a 1 : 2 : 3 ratio. Assessment 1 covers Part I only and counts 16.7% of the comprehension grade. Assessment 2 covers Parts I and II and counts 33.3%. Assessment 3 is fully comprehensive and counts 50%. Because this component is 30% of the course grade, the three assessments are worth 5%, 10%, and 15% of the final grade, respectively.
- **Scale:** Each assessment is scored 0–5 on the same scale and percentage conversion as the analog sprints; the expected and modal score is a 3. Your score for this component is the weighted average of the three assessments' percentage equivalents, using the 1 : 2 : 3 weights above (e.g., a 3 on all three assessments averages 90%, and 90% × 30 = 27 percentage points of the final grade). If you score 2 or below on an assessment, you have the option of an oral defense or rewrite; a successful remediation raises that assessment's score by 1 point, and an unsuccessful remediation leaves the original score in place.
- **Missed Assessments:** The three assessment dates are fixed. If a documented illness, emergency, or other University-recognized absence prevents you from sitting an assessment, notify the instructor in advance where possible; a makeup with different questions will be

scheduled, normally within one week. An unexcused absence is scored 0, with the same oral defense or rewrite option.

3. The Staged Research Proposal (30% of Final Grade)

You will develop a final research proposal (10 to 15 pages, double-spaced, not including the references section) suitable for an eventual journal submission or a grant application. The final written submission and in-class presentation on December 8 are scored together 0–5 on the same scale and percentage conversion as the analog sprints; the expected and modal score is a 3, and the percentage equivalent, after any check-in deductions, is applied to the component's 30% weight. The three check-ins are progress checkpoints and are not separately graded; however, failure to submit at a check-in or submission of subpar work will result in a deduction of 10 percentage points from your final proposal score's percentage equivalent for each missed or subpar check-in (e.g., a 3 on the final proposal with one missed check-in converts to 90 − 10 = 80%, and 80% × 30 = 24 percentage points of the final grade). Work is subpar when it does not meet the stage's stated deliverable (e.g., a Stage 1 précis that identifies no research problem or engages no literature). If a check-in submission is judged subpar, you will be notified and given a single opportunity to submit a revision; the deduction applies only if the revision still does not meet the deliverable or check-in submission are consistently judged as sub-par. A check-in missed without prior arrangement cannot be revised after the fact.

- **Check-In 1 (Sep 8):** Stage 1, The Core Puzzle & Literature Map. A 2 to 3 page précis identifying the research problem, situating it in the relevant literature, and articulating the central empirical or theoretical gap you propose to address.
- **Check-In 2 (Oct 6):** Stage 2, Theoretical Framework & Methodology. A revised and expanded draft incorporating your theoretical anchors and proposed methodological approach.
- **Check-In 3 (Nov 3):** Stage 3, Peer Feedback. Nothing is formally required for this third and final check-in, and you do not need to bring or submit anything. However, you should be able to clearly articulate your research question; your framing and the theories you use; the data you plan to use; your dependent variable; your explanatory variable or mechanisms; your hypotheses (if relevant); and how you plan to test them. Come prepared to receive feedback on your proposal from your peers.
- **Final Presentation & Written Proposal (Dec 8, 30% of the final grade):** The polished, complete proposal. You will present your work to the seminar on December 8. Written proposals are due at the start of class.

4. LLM Expansion Memos (10% of Final Grade)

This component turns the course's central claim — that LLMs are most powerful as complements to your own thinking, not substitutes for it — into graded practice. Across the semester, you will write three expansion memos, one for each of three modules of your choosing (three of the six), and one feedback memo on the course, described below. For each chosen module, pick one session, and expand the analog writing you produced that day into a short memo, working with an LLM of your choice.

The workflow mirrors the write-first sequence described in Course Philosophy & the Role of AI:

- **Write first (in class).** Your analog analytical sprint and any notes you take during the session are the seed. Nothing about the in-class routine changes.

- **Scan.** After the module ends, scan your handwritten sprint pages and session notes as a PDF (a phone scanning app works well).
- **Expand.** Upload the scan to an LLM of your choice and use it to develop, sharpen, and extend what you wrote: new connections across the module's readings, a tightened argument, an objection met. Note that handwriting recognition is imperfect, so expect to retype garbled passages yourself — that re-transcription is re-engagement with your own thinking, not wasted effort.
- **Submit on paper.** Bring the printed memo to class on the second Tuesday after the module's final session, about a week and a half later; for Modules 1 through 5, that Tuesday is the next module's B session. Staple your scanned handwritten pages behind it, and close with a brief process note (2–3 sentences): which LLM you used, what it contributed, and what you kept or rejected. If you didn't use an LLM, say so.
- **Length:** 1,000 words maximum (roughly 2–3 double-spaced pages), excluding the attached scans and the process note.
- **Due dates:** Module 1: Tuesday, September 15 (Module 2-B); Module 2: Tuesday, September 29 (Module 3-B); Module 3: Tuesday, October 13 (Module 4-B); Module 4: Tuesday, October 27 (Module 5-B); Module 5: Tuesday, November 10 (Module 6-B); Module 6: Tuesday, December 8 (Final Day of Class), because the second Tuesday after Module 6-C falls in Thanksgiving week, when the class does not meet. Memos are due at the start of class.
- **Marking:** Each memo is scored 0–5 on the same scale and percentage conversion as the analog sprints, and the expected and modal score is likewise a 3. Your score for this component is the average of the percentage equivalents of your four memos (the three expansion memos and the feedback memo), applied to the component's 10% weight. A 0 is recorded for memos that are missing, late without prior arrangement, or that bear no discernible relationship to the scanned pages submitted with them — the memo must grow out of your seed writing.
- **A note on Module 1:** Although the Module 1 sprints are ungraded practice runs, they still produce seed pages; a Module 1 memo (due September 15) is a low-stakes way to bank your first expansion early.
- **Feedback memo:** In addition to the three expansion memos, you will write one feedback memo on the course, due at the start of class on Tuesday, December 8 (Final Day of Class). The memo answers several questions: What worked well? What can be improved? What should I consider adding? What should not be changed? Any other suggestions or thoughts? It should be two pages, double-spaced. A feedback memo that follows this format automatically earns a 4.

Writing Suggestions

These suggestions can apply to the sprints, the Comprehension Assessments, and the memos.

- **Write a full thesis sentence.** A "yes" or "no" followed by a short sentence is not a thesis. Your thesis should state your position and give your main reason for it. A reader should know your whole argument after reading that one sentence.
- **Engage with the readings throughout.** The Comprehension Assessments test whether you understand the material. Show that understanding in every part of your answer, not only at the start. Name the authors in your sentences. Write "Merton (1973) argues that…" instead of placing "(Merton 1973)" at the end of a sentence. Then explain what the author's point means for your argument.
- **Write in full sentences.** Do not use shorthand, fragments, or note-style writing. Every sentence should be complete.
- **Go beyond "First, Second, Third."** These words list your points, but they do not explain how the points relate. Tell the reader how each point connects to the one before it. Does it build on the last point, challenge it, or explain it?
- **End each paragraph with purpose.** Your last sentence should state what the paragraph has shown, or it should lead into the next paragraph. Do not stop after your last piece of evidence.
- **Avoid the first person.** Do not write "I believe" or "I think." State the claim directly. "I think the evidence is weak" becomes "The evidence is weak."
- **Manage your time.** Fifteen minutes is enough time to write one large paragraph. On a Comprehension Assessment, you will need to write five or six paragraphs. Writing too little and writing far too much are both time management problems. Practice writing one complete, well-developed paragraph in the time given.
- **Add a references section to your memos.** Every memo should end with a list of the sources you cited. Each author you name in the memo should appear in that list with the full citation.

Grade Conversion

Final Grade Scale

Score	Grade	Description
90–100	A	Exceeds all requirements and expectations.
80–89	B	Meets all requirements and expectations.
70–79	C	Misses some requirements and expectations.
60–69	D	Significantly falls short of requirements.
< 60	E	Repeat of the course needed for credit.

Course Policies

- **Incomplete (I) or Withdrawal (W):** Requests must be made in accordance with University policies. See http://catalog.arizona.edu/policy/grades-and-grading-system for details.
- **Dispute of Grade:** You are entitled to request a review; a regrade may result in a lowered grade.
- **Device Policy:** The seminar room is device-free for everyone, including the instructor. See "The Analog Classroom: Device Policy" under Course Philosophy & the Role of AI for details and exceptions.
- **Extra Credit:** None offered, as there are ample opportunities to succeed within the existing structure.
- **University Policies:** https://catalog.arizona.edu/syllabus-policies
- **Graduate College Policies:** https://grad.arizona.edu/policies/academic-policies/graduate-college-syllabus-policy
- **Subject to Change:** Information in this syllabus may be subject to change with advance notice.

Full Course Schedule — Fall 2026

August 25 through December 8, 2026 · Tuesdays & Thursdays

Mod.	Date	Day	Session
—	**Aug 25**	**Tue**	**Introduction to the Seminar — No Readings**
1	Aug 27	Thu	Module 1-A (Practice Run)
1	Sep 1	Tue	Module 1-B (Practice Run) — ONLINE, (A)SYNCHRONOUS
1	Sep 3	Thu	Module 1-C (Practice Run)
—	**Sep 8**	**Tue**	**Proposal Check-In 1 — Stage 1 Due**
2	Sep 10	Thu	Module 2-A
2	Sep 15	Tue	Module 2-B · Module 1 Memo Due
2	Sep 17	Thu	Module 2-C
—	**Sep 22**	**Tue**	**COMPREHENSION ASSESSMENT 1 — Covers Part I**
3	Sep 24	Thu	Module 3-A · Part II Begins
3	Sep 29	Tue	Module 3-B · Module 2 Memo Due
3	Oct 1	Thu	Module 3-C
—	**Oct 6**	**Tue**	**Proposal Check-In 2 — Stage 2 Due**
4	Oct 8	Thu	Module 4-A
4	Oct 13	Tue	Module 4-B · Module 3 Memo Due
4	Oct 15	Thu	Module 4-C
—	**Oct 20**	**Tue**	**COMPREHENSION ASSESSMENT 2 — Cumulative: Parts I & II**
5	Oct 22	Thu	Module 5-A · Part III Begins — NEW ROOM, TBD
5	Oct 27	Tue	Module 5-B · Module 4 Memo Due
5	Oct 29	Thu	Module 5-C
—	**Nov 3**	**Tue**	**Proposal Check-In 3 — Stage 3 Peer Feedback**
6	Nov 5	Thu	Module 6-A
6	Nov 10	Tue	Module 6-B · Module 5 Memo Due
6	Nov 12	Thu	Module 6-C
—	**Nov 17**	**Tue**	**COMPREHENSION ASSESSMENT 3 — Fully Comprehensive**
—	**Nov 19**	**Thu**	**NO CLASS — Proposal Work Day**
—	**Nov 24**	**Tue**	**NO CLASS — Thanksgiving Week**

Mod.	Date	Day	Session
—	**Nov 26**	**Thu**	**NO CLASS — Thanksgiving Week**
—	**Dec 1**	**Tue**	**NO CLASS — Proposal Work Day**
—	**Dec 3**	**Thu**	**NO CLASS — Proposal Work Day**
—	**Dec 8**	**Tue**	**Final Day of Class — Presentations, Proposals & Module 6 Memo & Feedback Memo Due**

Legend:

- Comprehension Assessment
- Final Presentations
- Proposal Check-In
- No Class

Course Schedule and Readings

All module readings are to be completed before the session in which they appear. All readings are available on Brightspace. Readings marked with ✱ are supplemental — they are not required but are highly encouraged; students are strongly advised to look through them before class. Readings tagged [SKI] or [GTS] also appear on the School of Sociology comprehensive exam reading lists in Science, Knowledge, and Innovation or Global and Transnational Sociology, respectively; readings tagged with both appear on both lists.

Each reading is accompanied by a Reading Guide, distributed in advance via Brightspace. The guide situates the text within the module's wider themes and debates, flags the key arguments and concepts to track, and poses orienting questions to focus your preparation. You are strongly encouraged to work through the guide before and alongside each reading.

Introduction · Tuesday, August 25

This opening session introduces the course, its structure, the three-phase seminar format, and the four assessment components. Students will receive the syllabus, practice the analog analytical sprint with a low-stakes prompt, and discuss the framing questions that will anchor the semester: What is the relationship between scientific knowledge and political power? Who speaks for science, and on whose behalf? And what does it mean to study these questions from a global perspective? No readings are assigned.

PART I · Foundations of SKAT: From the Sociology of Knowledge to Political Epistemologies

Modules 1 and 2 · August 27 through September 17, 2026 · Comprehension Assessment 1: Tuesday, September 22

Module 1: From Institutionalization to the Relativistic Turn: Epistemological Foundations of the Sociology of Scientific Knowledge

Part I opens by tracing the intellectual arc from classical social theory's engagement with knowledge, through Merton's institutionalism, to the radical constructivism of the Strong

Programme and its laboratory-ethnographic successors — establishing the foundational claim of the course: scientific facts are socially accomplished achievements, not passively discovered truths.

Module 1-A · Thursday, August 27

All three sessions of Module 1 are ungraded practice runs.

Weber, Mannheim, and Berger and Luckmann establish the epistemic stakes of the course: if all knowledge is shaped by social position and reality itself is a product of ongoing social construction and legitimation, on what grounds can science claim to stand apart?

- Weber, M. (1946). "Science as a Vocation" (H. H. Gerth & C. W. Mills, Trans.). In H. H. Gerth & C. W. Mills (Eds.), From Max Weber: Essays in Sociology. Oxford University Press. (Original work published 1919) [SKI]
- Mannheim, K. (1936). Ideology and Utopia: An Introduction to the Sociology of Knowledge (Part V, "The Sociology of Knowledge," pp. 237–280). Harcourt, Brace. [SKI]
- Berger, P. L., & Luckmann, T. (1966). The Social Construction of Reality: A Treatise in the Sociology of Knowledge (pp. 1–18, 47–67, and 92–104). Doubleday. [SKI]

Module 1-B · Tuesday, September 1 · Online, (A)synchronous

This session is online, (a)synchronous. Merton's CUDOS norms and Polanyi's "Republic of Science" defend the institutional autonomy and self-governance of science as a protected epistemic community operating by its own internal norms. Kuhn's paradigm theory then destabilizes the entire edifice: if scientific change proceeds through revolutionary ruptures rather than cumulative progress, the Mertonian account of rational self-governance becomes far harder to sustain. The optional Zuckerman complements these debates with an empirical portrait of prestige stratification among Nobel laureates.

- Merton, R. K. (1973). "The Normative Structure of Science." In R. K. Merton, The Sociology of Science: Theoretical and Empirical Investigations. University of Chicago Press. [SKI]
- Polanyi, M. (1962). "The Republic of Science: Its Political and Economic Theory." Minerva, 1(1).
- Kuhn, T. S. (1962). The Structure of Scientific Revolutions (Ch. I–II, IX, and XII–XIII; pp. 1–22, 92–110, and 144–173). University of Chicago Press. [SKI]

✱ *Optional reading.*

- ✱ Zuckerman, H. (1977). Scientific Elite: Nobel Laureates in the United States (Ch. 1 and 8). Free Press.

Module 1-C · Thursday, September 3

Bloor's Strong Programme, Collins's EPOR, Shapin and Schaffer's history of experimental method, and Knorr-Cetina's cross-laboratory ethnographies mount the most radical constructivist challenge: scientific facts are locally accomplished, the closure of controversies is a social achievement, and there is no universal account of how science works.

- Bloor, D. (1976). Knowledge and Social Imagery (Ch. 1, "The Strong Programme in the Sociology of Knowledge"). Routledge. [SKI]
- Collins, H. M. (1981). "Stages in the Empirical Programme of Relativism." Social Studies of Science, 11(1).
- Shapin, S., & Schaffer, S. (1985). Leviathan and the Air-Pump: Hobbes, Boyle, and the Experimental Life (Ch. 1 and 8; pp. 3–21 and 332–344). Princeton University Press. [SKI]

- Knorr-Cetina, K. (1999). Epistemic Cultures: How the Sciences Make Knowledge (Ch. 1–2, pp. 1–46). Harvard University Press. [SKI]

📋 **Proposal Check-In 1** — Tuesday, September 8 | Stage 1 Due: The Core Puzzle & Literature Map · No module session

Module 2: Non-Human Actors, Artifacts, and the Political Critique of Universal Science

Module 2 extends constructivism from scientific knowledge to technological artifacts and large systems, introduces Actor-Network Theory's radical symmetry between human and non-human actors, and closes Part I with feminist, postcolonial, and lay-expertise critiques of science's claim to universalism.

Module 2-A · Thursday, September 10

Pinch and Bijker's SCOT framework shows how technological artifacts are socially shaped through interpretive flexibility and closure; Winner's foundational essay asks whether artifacts can embody political commitments independent of their users; and Hughes's account of large technological systems demonstrates how, once stabilized, such systems acquire momentum and political entailments that outlast the design conflicts that produced them.

- Pinch, T. J., & Bijker, W. E. (1984). "The Social Construction of Facts and Artefacts: Or How the Sociology of Science and the Sociology of Technology Might Benefit Each Other." Social Studies of Science, 14(3). [SKI]
- Winner, L. (1980). "Do Artifacts Have Politics?" Daedalus, 109(1).
- Hughes, T. P. (1987). "The Evolution of Large Technological Systems." In W. E. Bijker, T. P. Hughes, & T. J. Pinch (Eds.), The Social Construction of Technological Systems: New Directions in the Sociology and History of Technology. MIT Press.

Module 2-B · Tuesday, September 15

Callon, Latour, and Law's Actor-Network Theory dissolves the boundary between human and non-human actors, showing how heterogeneous networks of people, organisms, artifacts, and inscriptions enroll and translate one another to produce — and maintain — durable social and political order.

- Callon, M. (1986). "Some Elements of a Sociology of Translation: Domestication of the Scallops and the Fishermen of St Brieuc Bay." In J. Law (Ed.), Power, Action and Belief: A New Sociology of Knowledge?. Routledge & Kegan Paul.
- Latour, B. (1992). "Where Are the Missing Masses? The Sociology of a Few Mundane Artifacts." In W. E. Bijker & J. Law (Eds.), Shaping Technology/Building Society: Studies in Sociotechnical Change. MIT Press.
- Law, J. (1992). "Notes on the Theory of the Actor-Network: Ordering, Strategy, and Heterogeneity." Systems Practice, 5(4).

Module 2-C · Thursday, September 17

Haraway's "Situated Knowledges," Epstein's lay expertise critique, Frickel and colleagues' theorization of "undone science," and Benjamin's Race After Technology collectively argue that claims to universal scientific knowledge are always embedded in — and often serve — specific relations of power and exclusion; Frickel et al. show how social movements and civil society

organizations contest the systematic non-production of knowledge that serves dominant interests, and Benjamin extends these critiques into the present, showing how racialized logics are encoded into the design of technological systems even when they claim neutrality. The optional Harding volume situates these arguments within the broader postcolonial STS tradition.

- Epstein, S. (1995). "The Construction of Lay Expertise: AIDS Activism and the Forging of Credibility in the Reform of Clinical Trials." Science, Technology, & Human Values, 20(4). [SKI]
- Haraway, D. (1988). "Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective." Feminist Studies, 14(3).
- Frickel, S., Gibbon, S., Howard, J., Kempner, J., Ottinger, G., & Hess, D. J. (2010). "Undone Science: Charting Social Movement and Civil Society Challenges to Research Agenda Setting." Science, Technology, & Human Values, 35(4), 444–473.
- Benjamin, R. (2019). Race After Technology: Abolitionist Tools for the New Jim Code (Introduction, "The New Jim Code"). Polity.

✱ *Optional reading.*

- ✱ Harding, S. (Ed.). (2011). The Postcolonial Science and Technology Studies Reader (editor's introduction). Duke University Press.

📝 **COMPREHENSION ASSESSMENT 1** — Tuesday, September 22 | Covers all Part I material, Modules 1 and 2 · 16.7% of the comprehension grade

PART II · Global Frameworks of Knowledge, Power, and the International System

Modules 3 and 4 · September 24 through October 15, 2026 · Comprehension Assessment 2: Tuesday, October 20

Module 3: The Global Knowledge Order and Macro-Structures of Global Science: Geopolitics, Systems, and Society

Module 3 maps the spatial and structural landscape of global science — moving from the methodological nationalism that has distorted social-scientific thinking, through the historical formation of Big Science, to the competing macro-structural explanations of world-society and world-systems theory, and finally to the geopolitical and postcolonial critiques that challenge and empirically ground both macro-frameworks.

Module 3-A · Thursday, September 24

Walt's accessible survey maps the major theoretical traditions in international relations — realism, liberalism, and constructivism — and frames the question of why IR theory matters for empirical research; Goddard and colleagues situate international political sociology as a distinct field; Wimmer and Schiller's critique of methodological nationalism establishes the core spatial challenge that the social sciences have systematically obscured the transnational and global by treating the nation-state as their natural unit of analysis; and Lidskog and Sundqvist's intervention directly bridges IR and STS, asking under what conditions scientific knowledge actually enters and shapes international political decision-making. Mayer, Carpes, and Knoblich's introductory chapter to their two-volume collection on the global politics of science and technology provides a synoptic diagnosis of why IR has systematically externalized science and technology, surveys the disciplinary landscape, and

proposes the concept of "techno-politics" as a middle zone between technological determinism and social constructivism. The optional Bull and Nabers and Stengel provide foundational and encyclopedic context on the international system and the IPS field, respectively.

- Walt, S. M. (1998). "International Relations: One World, Many Theories." Foreign Policy, 110, 29–46. [GTS]
- Goddard, S. E., Lawson, G., & Sending, O. J. (2025). "Introduction." In S. E. Goddard, G. Lawson, & O. J. Sending (Eds.), The Oxford Handbook of International Political Sociology. Oxford University Press.
- Wimmer, A., & Schiller, N. G. (2002). "Methodological Nationalism and Beyond: Nation-State Building, Migration and the Social Sciences." Global Networks, 2(4). [GTS]
- Lidskog, R., & Sundqvist, G. (2015). "When Does Science Matter? International Relations Meets Science and Technology Studies." Global Environmental Politics, 15(1), 1–20. doi:10.1162/GLEP_a_00269. [GTS]
- Mayer, M., Carpes, M., & Knoblich, R. (2014). "The Global Politics of Science and Technology: An Introduction." In M. Mayer, M. Carpes, & R. Knoblich (Eds.), The Global Politics of Science and Technology – Vol. 1: Concepts from International Relations and Other Disciplines (pp. 1–35). Springer. [GTS]

✱ *Optional readings.*

- ✱ Bull, H. (2002). The Anarchical Society: A Study of Order in World Politics (3rd ed.) (Ch. 1, "The Concept of Order in World Politics"). Columbia University Press. [GTS]
- ✱ Nabers, D., & Stengel, F. A. (2019). "International/Global Political Sociology." In Oxford Research Encyclopedia of International Studies. Oxford University Press.

Module 3-B · Tuesday, September 29

Hobden and Hobson's historical sociology shows that the global knowledge order is historically contingent rather than natural; Allan's introduction to Science and the Transformation of International Politics argues that science has fundamentally reshaped the ontological foundations of international order, providing a constructivist IR framework for understanding how scientific knowledge constitutes political authority; Sá and Sabzalieva trace how states deploy scientific achievement as a vehicle of national identity; and Marginson synthesizes the four competing narratives driving global science today. The optional Allan chapter on cosmology and international orders deepens the constructivist argument by tracing how shifting scientific cosmologies have historically driven transformations in international political structures. The optional Price provides the foundational concept of Big Science as classic structural backdrop, and Moscovitz and Sabzalieva extend the scientific nationalism argument into the new geopolitics of higher education.

- Hobson, J. M. (2002). "What's at Stake in 'Bringing Historical Sociology Back into International Relations'? Transcending 'Chronofetishism' and 'Tempocentrism' in International Relations." In S. Hobden & J. M. Hobson (Eds.), *Historical Sociology of International Relations* (pp. 3–41). Cambridge University Press.
- Sá, C. M., & Sabzalieva, E. (2018). "Scientific Nationalism in a Globalizing World." In B. Cantwell, H. Coates, & R. King (Eds.), Handbook on the Politics of Higher Education (pp. 149–166). Edward Elgar Publishing.
- Marginson, S. (2022). "What Drives Global Science? The Four Competing Narratives." Studies in Higher Education, 47(8), 1566–1584. [GTS]

- Allan, B. B. (2018). "Introduction: Science and the Transformation of International Politics." Pp. 1–23 in Science and the Transformation of International Politics: Toward a New Ontological Order. Cambridge University Press. [GTS]

✱ *Optional readings.*

- ✱ Price, D. J. de Solla. (1963). Little Science, Big Science (Ch. 1, "Prologue to a Science of Science"). Columbia University Press.
- ✱ Moscovitz, H., & Sabzalieva, E. (2023). "Conceptualising the New Geopolitics of Higher Education." Globalisation, Societies and Education, 21(2), 149–165.
- ✱ Allan, B. B. (2018). "Cosmology and Change in International Orders." Pp. 29–74 in Scientific Cosmology and International Orders. Cambridge University Press.

Module 3-C · Thursday, October 1

Meyer and colleagues' world-society theory and Wallerstein's world-systems theory offer competing macro-structural explanations for global scientific convergence — shared cultural scripts versus structural core-periphery inequality — while Cantwell and Grimm ground both frameworks empirically, mapping the contemporary geopolitics of academic science at the national and regional level. The optional Sabaratnam, Seth, and Go push back against the epistemic hierarchies embedded in all three accounts from postcolonial and decolonial perspectives.

- Meyer, J. W., Boli, J., Thomas, G. M., & Ramirez, F. O. (1997). "World Society and the Nation-State." American Journal of Sociology, 103(1). [GTS]
- Wallerstein, I. (2004). World-Systems Analysis: An Introduction (Ch. 1–2, pp. 1–41). Duke University Press. [GTS]
- Cantwell, B., & Grimm, A. (2018). "The Geopolitics of Academic Science." In B. Cantwell, H. Coates, & R. King (Eds.), Handbook on the Politics of Higher Education (pp. 130–148). Edward Elgar Publishing. DOI: https://doi.org/10.4337/9781786435026.00016

✱ *Optional readings.*

- ✱ Sabaratnam, M. (2025). "Decolonizing International Political Sociology." In S. E. Goddard, G. Lawson, & O. J. Sending (Eds.), The Oxford Handbook of International Political Sociology. Oxford University Press.
- ✱ Seth, S. (2009). "Putting Knowledge in Its Place: Science, Colonialism, and the Postcolonial." Postcolonial Studies, 12(4).
- ✱ Go, J. (2013). "For a Postcolonial Sociology." Theory and Society, 42(1), 25–55. doi:10.1007/s11186-012-9184-6. [GTS]

Proposal Check-In 2 — Tuesday, October 6 | Stage 2 Due: Theoretical Framework & Methodology · No module session

Module 4: Theorizing Power, Imperial Forms, and Hegemony: From Global Fields to Technopolitics and National Sovereignty

Module 4 supplies the theoretical toolkit for analyzing how power operates through scientific knowledge — drawing on Bourdieu's field theory, Gramscian hegemony, Althusserian ideology, Foucauldian discourse, and Jasanoff's co-production idiom — and grounds these frameworks in

empirical cases of science governance, technopolitics, and national sovereignty over scientific knowledge.

Module 4-A · Thursday, October 8

Go's global fields framework traces how imperial histories structure scientific prestige hierarchies; Buchholz's theorization of the global field extends Bourdieusian field theory beyond the nation-state, asking what conceptual tools we need to map fields that operate across multiple national contexts; Gramsci's hegemony theory explains how dominant scientific frameworks naturalize themselves as simply rational; and Bigo's programmatic essay demonstrates how the tools of field, habitus, and practice can be deployed empirically to analyze power in IR. The optional Adler-Nissen volume, Hamann chapter, and Schmidt-Wellenburg and Bernhard's methodological introduction extend these frameworks to the broader IR and education globalization literatures and offer concrete guidance for charting transnational fields empirically.

- Go, J. (2008). "Global Fields and Imperial Forms: Field Theory and the US and British Empires." Sociological Theory, 26(3). [GTS]
- Buchholz, L. (2016). "What Is a Global Field? Theorizing Fields beyond the Nation-State." The Sociological Review Monographs, 64(2), 31–60. doi:10.1002/2059-7932.12001. [GTS]
- Gramsci, A. (1971). Selections from the Prison Notebooks (Q. Hoare & G. N. Smith, Trans. & Eds.) ("The Intellectuals," pp. 3–23, and "The Study of Philosophy," pp. 321–343). International Publishers. [GTS]
- Bigo, D. (2011). "Pierre Bourdieu and International Relations: Power of Practices, Practices of Power." International Political Sociology, 5(3), 225–258. DOI: https://doi.org/10.1111/j.1749-5687.2011.00132.x

✱ *Optional readings.*

- ✱ Adler-Nissen, R. (Ed.). (2012). Bourdieu in International Relations: Rethinking Key Concepts in IR (editor's introduction). Routledge.
- ✱ Hamann, J. (2024). "Field Theory Beyond the Nation State." In P. Mattei, X. Dumay, E. Mangez, & J. Behrend (Eds.), The Oxford Handbook of Education and Globalization. Oxford University Press. DOI: https://doi.org/10.1093/oxfordhb/9780197570685.013.37
- ✱ Schmidt-Wellenburg, C., & Bernhard, S. (2020). "How to Chart Transnational Fields: Introduction to a Methodology for a Political Sociology of Knowledge." In C. Schmidt-Wellenburg & S. Bernhard (Eds.), Charting Transnational Fields (pp. 1–33). Routledge.
- ✱ Brundage, J. S. (2018). "The Social Sources of Geopolitical Power: French and British Diplomacy and the Politics of Interstate Recognition, 1689 to 1789." American Sociological Review, 83(6).

Module 4-B · Tuesday, October 13

Christensen's comparative analysis of Foucault, Bourdieu, and Habermas provides an analytical map of the three major power frameworks that anchor Module 4; Althusser's ideological state apparatuses and Foucault's politics of truth then reveal the institutional and discursive mechanisms through which dominant knowledge regimes are produced and authorized. Together these three texts build the conceptual vocabulary that Module 4-C will apply empirically through co-production and national sovereignty frameworks.

- Christensen, G. (2024). "Three Concepts of Power: Foucault, Bourdieu, and Habermas." Power and Education, 16(2), 182–95. doi:10.1177/17577438231187129.

- Althusser, L. (1970). "Ideology and Ideological State Apparatuses (Notes Towards an Investigation)." In Lenin and Philosophy and Other Essays. Monthly Review Press.
- Foucault, M. (1980). "Truth and Power." In C. Gordon (Ed.), Power/Knowledge: Selected Interviews and Other Writings, 1972–1977. Pantheon Books.

✱ *Optional reading.*

- ✱ England, C. (2019). "Hegemony, Ideology, Governmentality: Theorizing State Power after Weber." Spectra, 7(1), 13–23.

Module 4-C · Thursday, October 15

Jasanoff's "Ordering Knowledge, Ordering Society" lays out the co-production framework at its most programmatic, arguing that the ways societies produce and validate knowledge are inseparable from the ways they organize political authority; The Ethics of Invention extends this into a normative challenge about who should govern technological systems and on whose terms; and Mallard and Paradeise's introduction to Global Science and National Sovereignty grounds co-production empirically, examining how states across multiple national and historical contexts appropriate, contest, and deploy scientific knowledge as a direct instrument of political power and national sovereignty. The optional Jasanoff "Idiom of Co-Production" offers the companion theoretical statement from the same volume. The optional Mitchell offers a rich postcolonial case study of these dynamics in colonial and postcolonial Egypt. The optional Mayer, Carpes, and Knoblich companion introduction operationalizes the interaction/co-production distinction as a research-design framework.

- Jasanoff, S. (2004). "Ordering Knowledge, Ordering Society." Pp. 13–45 in States of Knowledge: The Co-Production of Science and the Social Order, edited by S. Jasanoff. London: Routledge. [SKI]
- Jasanoff, S. (2016). The Ethics of Invention: Technology and the Human Future (Ch. 1, "The Power of Technology," and Ch. 9, "Invention for the People"). W. W. Norton.
- Mallard, G., & Paradeise, C. (2009). "Global Science and National Sovereignty: A New Terrain for the Historical Sociology of Science." Pp. 1–29 in Global Science and National Sovereignty: Studies in Historical Sociology of Science, edited by G. Mallard, C. Paradeise, & A. Peerbaye. New York: Routledge.

✱ *Optional readings.*

- ✱ Mitchell, T. (2002). Rule of Experts: Egypt, Techno-Politics, Modernity (Introduction and Ch. 1, pp. 1–53). University of California Press.
- ✱ Hilgartner, S. (2000). Science on Stage: Expert Advice as Public Drama (Ch. 1). Stanford University Press.
- ✱ Mayer, M., Carpes, M., & Knoblich, R. (2014). "A Toolbox for Studying the Global Politics of Science and Technology." In M. Mayer, M. Carpes, & R. Knoblich (Eds.), The Global Politics of Science and Technology – Vol. 2 (pp. 1–14). Springer.
- ✱ Jasanoff, S. (2004). "The Idiom of Co-Production." In S. Jasanoff (Ed.), States of Knowledge: The Co-Production of Science and Social Order. Routledge.

📝 **COMPREHENSION ASSESSMENT 2** — Tuesday, October 20 | Cumulative, covers all Parts I and II (Modules 1 through 4) · 33.3% of the comprehension grade

PART III · The Architecture of Global Knowledge: Networks, Professionals, and Multipolarity

Modules 5 and 6 · October 22 through November 12, 2026 · Comprehension Assessment 3: Tuesday, November 17

Module 5: Epistemic Communities, Transnational Professionals, and the Universalism Paradox

Module 5 shifts scale from structural macro-theories to the meso-level actors who inhabit and reproduce global knowledge networks — epistemic communities and transnational professionals — before confronting the deep structural asymmetries that make global knowledge "global" in a deeply uneven sense.

Module 5-A · Thursday, October 22 · New Room, TBD

This session has been relocated to a new room (TBD). Haas's epistemic communities framework shows how credentialed expert networks exercise global policy influence in the absence of formal authority; Fourcade's historical sociology of the economics profession demonstrates that the standardization of "good science" always carries the cultural imprint of dominant national traditions; Harrington and Seabrooke's Annual Review synthesis extends this lens to transnational professionals more broadly; and Kwiek's analysis of the globalization of science shows how individual scientists — not just institutions or states — have become key agents in the production and circulation of global knowledge, with significant implications for center-periphery dynamics in research.

- Haas, P. M. (1992). "Introduction: Epistemic Communities and International Policy Coordination." International Organization, 46(1). [GTS]
- Fourcade, M. (2006). "The Construction of a Global Profession: The Transnationalization of Economics." American Journal of Sociology, 112(1).
- Harrington, B., & Seabrooke, L. (2020). "Transnational Professionals." Annual Review of Sociology, 46(4), 399–417. DOI: https://doi.org/10.1146/annurev-soc-112019-053842
- Kwiek, M. (2023). "The Globalization of Science: The Increasing Power of Individual Scientists." In P. Mattei, X. Dumay, E. Mangez, & J. Behrend (Eds.), The Oxford Handbook of Education and Globalization (pp. 728–73). Oxford University Press.

✱ *Optional readings.*

- ✱ Haas, E. B. et al. (1977). "How Does International Science Relate to World Order?" Pp. 1–16 in Scientists and World Order. Cambridge, MA: The MIT Press.

Module 5-B · Tuesday, October 27

Dezalay and Garth reveal how "internationalization" is shaped by competing national and institutional capitals rather than neutral expertise, Beck's cosmopolitan vision argues that global risks are generating new possibilities for genuinely transnational governance, and Kennedy pivots to the knowledge actors themselves — the intellectuals, institutions, and networks that both shape and are shaped by global flows through the work of recognition, translation, and articulation — an agent-centered account that questions whether cosmopolitan dispositions can adequately engage the challenge of difference.

- Dezalay, Y., & Garth, B. G. (2002). The Internationalization of Palace Wars: Lawyers, Economists, and the Contest to Transform Latin American States (Ch. 1–3). University of Chicago Press.
- Beck, U. (2006). The Cosmopolitan Vision (C. Cronin, Trans.) (Introduction and Ch. 1, pp. 1–47). Polity Press.
- Kennedy, M. D. (2015). Globalizing Knowledge: Intellectuals, Universities, and Publics in Transformation (Ch. 1). Stanford University Press.

✱ *Optional readings.*

- ✱ Mudge, S. L., & Vauchez, A. (2012). "Building Europe on a Weak Field: Law, Economics, and Scholarly Avatars in Transnational Politics." American Journal of Sociology, 118(2), 449–492.
- ✱ Bringel, B., & Domingues, J. M. (2015). "Global Modernity and Social Contestation." In B. Bringel & J. M. Domingues (Eds.), Global Modernity and Social Contestation. SAGE.

Module 5-C · Thursday, October 29

Connell and colleagues reconceptualize knowledge as the product of materially situated social labour, grounding claims about metropolitan hegemony in empirical research on knowledge workers and institutions across three southern-tier countries; Beigel and Demeter then document the structural asymmetries of global publishing that sustain that hegemony, from peripheral extraversion and segmented circuits to citation hegemonies and linguistic disadvantages that systematically marginalize non-Anglo-American scholars. Au's introduction to Dreams of Global Science carries these asymmetries into a single national case, tracing how "academic nationality" and a durable crisis of recognition shape the reception of Chinese science abroad, and how scientists accumulate and convert global and national scientific capital at an exchange rate that runs steeply in one direction. The optional Gargouri and colleagues complicates reform proposals by showing that open-access mandates have more contested effects on citation inequality than advocates claimed.

- Beigel, F. (2014). "Publishing from the Periphery: Structural Heterogeneity and Segmented Circuits." Current Sociology, 62(5).
- Demeter, M. (2020). Academic Knowledge Production and the Global South: Questioning Inequality and Geopolitics (Ch. 1 and 3; pp. 3–24 and 63–84). Palgrave Macmillan.
- Connell, R., Collyer, F., Maia, J., & Morrell, R. (2017). "Toward a Global Sociology of Knowledge: Post-Colonial Realities and Intellectual Practices." International Sociology, 32(1), 21–37. doi:10.1177/0268580916676913 [GTS]
- Au, L. (forthcoming). "Introduction: Chinese Scientific Ascendancy." In Dreams of Global Science: The Transnational Politics of Chinese Biomedical Innovation. Columbia University Press.

✱ *Optional readings.*

- ✱ Gargouri, Y., Hajjem, C., Larivière, V., Gingras, Y., Carr, L., Brody, T., & Harnad, S. (2010). "Self-Selected or Mandated, Open Access Increases Citation Impact for Higher Quality Research." PLoS ONE, 5(10).
- ✱ Stevens, M. L., Miller-Idriss, C., & Shami, S. (2018). Seeing the World: How U.S. Universities Make Knowledge in a Global Era (Ch. 1). Princeton University Press.

Proposal Check-In 3 — Tuesday, November 3 | Stage 3: Peer Feedback (nothing due)
· No module session

Module 6: Mapping Our Multipolar World: Networks, Methodologies, and the Shifting Center of Gravity

Module 6 turns to the empirical and methodological tools for mapping global scientific fields, the political economy of neoliberal science, and then confronts the structural transformation underway — hierarchies in world politics, network concentration, techno-nationalism versus techno-globalism, and the new extractive logics of data capitalism — asking whether our theoretical frameworks remain adequate to the multipolar world they must describe.

Module 6-A · Thursday, November 5

Evans's analysis of how electronic publication paradoxically narrows scientific scholarship raises the recursive methodological challenge the course has been building toward: can we study global knowledge hierarchies using the same quantitative tools that those hierarchies have produced and legitimized? Moore, Kleinman, Hess, and Frickel argue that the ascendancy of neoliberal globalization has fundamentally restructured the political conditions under which science is produced and governed, demanding a political sociological approach that connects bibliometric patterns to the macro-political forces shaping them. Hess and Frickel build out the theoretical apparatus this approach requires, developing the twin problematics of interfield relations — the dynamics linking science to political, economic, and civil-society fields — and institutional logics, the cultural systems that pattern expert practice within and across those fields.

- Evans, J. A. (2008). "Electronic Publication and the Narrowing of Science and Scholarship." Science, 321(5887). [SKI]
- Moore, K., Kleinman, D. L., Hess, D., & Frickel, S. (2011). "Science and Neoliberal Globalization: A Political Sociological Approach." Theory and Society, 40(5), 505–532. doi:10.1007/s11186-011-9147-3. [SKI · GTS]
- Hess, D. J., & Frickel, S. (2014). "Introduction: Fields of Knowledge and Theory Traditions in the Sociology of Science." In S. Frickel & D. J. Hess (Eds.), Fields of Knowledge: Science, Politics and Publics in the Neoliberal Age (Political Power and Social Theory, Vol. 27, pp. 1–30). Emerald Group Publishing. [SKI]

✱ *Optional reading.*

- ✱ Leydesdorff, L., & Wagner, C. S. (2008). "International Collaboration in Science and the Formation of a Core Group." Journal of Informetrics, 2(4).

Module 6-B · Tuesday, November 10

Castells's "space of flows" argues that informational capitalism has produced a new spatial logic in which connectivity to dominant networks is the primary axis of inclusion and exclusion; Bially Mattern and Zarakol deepen this structural account by arguing that the international order is constituted not by anarchy among formal equals but by durable hierarchies of status, authority, and legitimacy — a condition that shapes which knowledge systems occupy dominant positions in global networks; Appadurai's grassroots globalization insists on the capacity of local and subaltern communities to generate alternative globalizations from below; and Milan and Treré's "Big Data from the South(s)" challenges the universalist assumptions of dominant data epistemologies by

foregrounding how communities in the Global South produce, contest, and repurpose datafied knowledge on their own terms.

- Castells, M. (2011). The Rise of the Network Society: The Information Age: Economy, Society, and Culture (2nd ed., Vol. I) (Ch. 6, "The Space of Flows"). Wiley-Blackwell. [GTS]
- Bially Mattern, J., & Zarakol, A. (2016). "Hierarchies in World Politics." International Organization, 70(3), 623–654. doi:10.1017/S0020818316000126. [GTS]
- Appadurai, A. (2001). "Grassroots Globalization and the Research Imagination." In A. Appadurai (Ed.), Globalization. Duke University Press.
- Milan, S., & Treré, E. (2019). "Big Data from the South(s): Beyond Data Universalism." Television & New Media, 20(4).

Module 6-C · Thursday, November 12

Nakayama's short but incisive essay names the central tension the session is organized around: techno-nationalism, in which states treat scientific and technological capacity as instruments of national power, versus techno-globalism, in which science is understood as an inherently borderless enterprise best advanced through open collaboration. Chen's Asia as Method proposes a deimperialized framework for understanding inter-Asian knowledge circulation beyond the Western center-periphery binary. Nelson's "Field Theory" then carries both tensions into the present, arguing that artificial intelligence demands renewed social-scientific attention at once as question, object, and tool: she traces how algorithmic systems extend rationalization, inequality, and racialized power through a "full AI stack" — from critical-mineral extraction and data-center energy to transnational data labor and platform monopolies — and asks whether the discipline's inherited frameworks remain adequate to a technology of such scale, opacity, and geopolitical reach. Gomez and colleagues then close the module by proposing a synthetic framework for the seminar's central problem: epistemic, material, and state power are treated as three cartographies that map global science differently, along the modalities of value, possibility, and permission, and the friction and leverage generated where those maps fail to align become the object that a global political sociology of science, knowledge, and technology is built to track. The optional Couldry and Mejias develops the companion concept of "data colonialism," showing how platform monopolies, surveillance infrastructure, and data asymmetries may be reproducing old patterns of dependency in digital form.

- Nakayama, S. (2012). "Techno-Nationalism versus Techno-Globalism." East Asian Science, Technology and Society, 6(1), 9–15.
- Chen, K.-H. (2010). Asia as Method: Toward Deimperialization (Introduction and Ch. 5; pp. 1–16 and 211–256). Duke University Press.
- Nelson, A. (2026). "Field Theory: AI as Social Science Question, Object & Tool." Daedalus, 155(1–2), 316–334.
- Gomez, C. J., Baier, S., Chen, D., & Shen, J. (under review). "Cartographies of Power in the Global Politics of Science, Knowledge, and Technology." Nature Human Behaviour.

✱ *Optional reading.*

- ✱ Couldry, N., & Mejias, U. A. (2019). The Costs of Connection: How Data Is Colonizing Human Life and Appropriating It for Capitalism (Preface and Ch. 1, "The Capitalization of Life without Limit"). Stanford University Press.

📝 **COMPREHENSION ASSESSMENT 3** — Tuesday, November 17 | Fully comprehensive, covers all Parts I, II, and III (Modules 1 through 6) · 50% of the comprehension grade

Proposal Work Day — No Class Thursday, November 19

Thanksgiving Break — No Class November 24 and November 26

Proposal Work Days — No Class December 1 and December 3

Final Day of Class · Tuesday, December 8

The final session returns to the question posed at the outset: in an era of multipolar nationalism, can the sociology of science still rely on concepts of "universal" knowledge, and does it want to? Each student presents their research proposal to the seminar (approximately 10 minutes each), followed by collective discussion. Before presentations begin, a brief synthesis of the semester's theoretical arc will identify the tensions that proved most generative and those that remain unresolved across all six modules. No new readings are assigned. Final research proposals are due at the start of class. Module 6 LLM Expansion Memos are also due at the start of class. Feedback memos are due at the start of class as well.

Final Research Proposals Due at Start of Class — Tuesday, December 8