# מדע, מדיניות, וערכים

## Science, Policy, and Values

ד"ר בועז מילר

**סוג הקורס:** סמינר

**שנת לימודים**: תשע"ה **סמסטר**: שנתי **היקף שעות**: 2

### א. מטרות הקורס

להכיר לתלמידי מחקר לתואר שני ושלישי בלימודי מדע טכנולוגיה וחברה (STS) סוגיות מרכזיות בשיח המחקרי ב-STS וב-HPS העוסק ביחסים בין מדע, מדיניות ציבורית, ערכים, ודמוקרטיה.

### ב. תוכן הקורס

בעשורים האחרונים השתנו טיב הקשרים ויחסי הכוח בין המדע, המדינה, והתעשייה. מחקר מדעי שבעבר נעשה באוניברסיטאות ציבוריות נעשה באופן מלא או חלקי במגזר הפרטי. המדע הפך מרכזי יותר בסוגיות פוליטיות שנויות במחלוקת כגון המדיניות שיש לנקוט לאור שינויי האקלים העולמיים. עולה כיום יותר רצון מצד מקבלי החלטות לבסס את החלטותיהם על ממצאים מדעיים. תמורות אלו מעניינות כשלעצמן, ומעוררות גם שאלות רבות סביב האופנים שבהם ניתן להמשיג את יחסי המדע, המדינה, והתעשייה, וסביב היחסים שראוי שיתקיימו בין מוסדות חברתיים אלה. בנוסף, האופן שבו יש וניתן לחקור סוגיות אלה מעלה דילמות מתודולוגיות בקרב חוקרים ממדע, טכנולוגיה, וחברה (STS) ומהיסטוריה ופילוסופיה של המדע (HPS). הסמינר יעסוק בנושאים אלה תוך התייחסות לחומרים רלוונטיים מתוך הדיסציפלינה.

In recent decades, we have witnessed changes in the relations, and shifts of power between science, the state, and the industry. Scientific research, which was previously conducted in the public university, has partly or fully moved to the private industry. Science has occupied a central place in political debates, such as the policy that should be taken with respect to global climate change. Decision makers now wish more than before to base their decisions on scientific evidence. These transformations are intrinsically interesting, and also raise many questions regarding the ways in which the relations between science, the state, and the industry may be conceptualized, and the relations that should prevail between these social institutions. In addition, the ways in which such issues can and should be studied give rise to methodological dilemmas among scholars from the fields of Science and Technology Studies (STS) and History and Philosophy of Science (HPS). The seminar deals with these issues, while engaging with relevant materials from the discipline.

### מהלך השיעורים

הוראה פרונטלית, דיון בכיתה, ורפרט קצר של מאמר על ידי סטודנט מידי מפגש.

### תכנית הוראה מפורטת לכל השיעורים

**חטיבה א: מדע וערכים**

תפיסה מקובלת בקרב מדענים, בקרב קובעי מדיניות, ובקרב הציבור היא שקיימת הפרדה בין עובדות וערכים, וכי מדע עוסק בעובדות בלבד. תפיסה זו הייתה מקובלת בפילוסופיה של המדע בתחילת המאה העשרים, אולם עמדה לביקורת רבה, וכיום היא נחלת מיעוט. נדון בטיעונים בעד העמדות השונות ונגדן, ובדגמים אפשריים שונים של יחסי מדע וערכים.

1. היכרות ומבוא
2. קשיים באידיאל של מדע נטול ערכים Difficulties with the Value-Free Ideal for Science

Required:

Wilholt, Torsten. 2010. Bias and Values in Scientific Research. *Studies in History and Philosophy of Science* 40(1): 92-101.

**Additional:**

Douglas, Heather. 2007. *Science, Policy, and the Value-Free Ideal*. Ch. 5: The Structure of Values in Science, 87-114. Pittsburgh, PA: University of Pittsburgh Press.

Longino, Helen E. 2005. How Values Can Be Good for Science. In *Science, Values, and Objectivity*, eds. Peter Machamer & Gereon Wolters, 127-142. Pittsburgh, PA: University of Pittsburgh Press.

Hicks, Dan. 2014. A New Direction for Science and Values. *Syntehse* 191(14): 3271-3295.

Steel, Daniel. 2010. Epistemic Values and the Argument from Inductive Risk. *Philosophy of Science* 77(1): 14-34.

Biddle, Justin. 2013. State of the Field: Transient Underdetermination and Values in Science. *Studies in History and Philosophy of Science* 44(1): 124-133.

Miller, Boaz. 2014. Catching the WAVE: The Weight-Adjusting Account of Values and Evidence. *Studies in History and Philosophy of Science* 47: 69–80.

## 3. טיעונים בזכות האידיאל של מדע נטול ערכים Arguments for the Value-Free Ideal

**Required:**

ליבוביץ', ישעיהו. 1968. בין מדע לבין ערכים ואידיאולוגיה. **מדע** י"ג(4): 232-234.

Mitchel, Sandra. 2005. The Prescribed and Proscribed Values in Science Policy. In *Science, Values, and Objectivity*, eds. Peter Machamer & Gereon Wolters, 245-255. Pittsburgh, PA: University of Pittsburgh Press.

**Additional:**

McMullin, Ernan. 1983. Values in Science. In *PSA 1982*, *vol. 2*, eds. P. Asquith, & T. Nickles, 3-28. East Lansing: PSA.

Lacey, Hugh. 2005. On the Interplay of the Cognitive and the Social in Scientific Practices. *Philosophy of Science* 72(5): 977-988.

Lacey, Hugh. 2002. The Ways in Which the Sciences Are and Are Not Value Free. In *In the Scope of Logic, Methodology and Philosophy of Science*, eds. P. Gardenfors, K. Kijania-Placek & J. Wolenski, 513-526. Dordrecht: Kluwer.

Betz, Gregor. 2013. In Defence of the Value-Free Ideal. *European Journal for the Philosophy of Science 3*(2): 207-220.

## 4. "מדע אחראי מבחינה חברתית" "Socially Responsible Science"

**Required:**

Kourany, Janet A. 2010. *Philosophy of Science after Feminism*. Ch. 3: What Feminist Science Studies Can Offer; Ch. 4: Challenges from Every Direction, 49-104. Oxford: Oxford University Press.

**Additional:**

למציגים, יש להציג את אחד המאמרים וכן את התשובה של קראני אליו.

Brown, Matthew J. 2013. The Source and Status of Values for So`cially Responsible Science. *Philosophical Studies* 163(1): 67-76.

Lacey, Hugh. 2013. Rehabilitating Neutrality. *Philosophical Studies* 163(1): 77-83.

Potter, Elizabeth. 2013. Scientific Judgment and Agonistic Pluralism. *Philosophical Studies* 163(1): 85-92.

Dupré, John. 2012. Comments on Philosophy of Science after Feminism, by Janet Kourany. *Perspectives on Science* 20(3): 310-319.

Rolin, Kristina. 2012. A Feminist Approach to Values in Science. *Perspectives on Science* 20(3): 320-330.

Solomon, Miriam. 2012. Socially Responsible Science and the Unity of Values. *Perspectives on Science* 20(3): 331-338.

Kourany, Janet A. 2013. Meeting the Challenges to Socially Responsible Science: Reply to Brown, Lacey, and Potter. *Philosophical Studies* 163(1): 93-103.

Kourany, Janet A. 2012. The Ideal of Socially Responsible Science: Reply to Dupré, Rolin, Solomon, and Giere. *Perspectives on Science* 20(3): 334-352.

5. ערעורים על ההבחנה בין ערכים לעובדות Challenges to the Fact/Value Distinction

**Required:**

Latour, Bruno. 2004. *Politics of Nature: How to Bring the Sciences into Democracy*. Ch. 3: A New Separation of Powers, 91-127. Cambridge, MA: Harvard University Press.

**Additional:**

Putnam, Hilary. 2002. *The Collapse of the Fact/Value Dichotomy and Other Essays*. Ch. 2: The Entanglement of Fact and Values, 28-47. Cambridge, MA: Harvard University Press.

Anderson, Elizabeth. 2004. Uses of Value Judgments in Science: A General Argument, with Lessons from a Case Study of Feminist Research on Divorce. *Hypatia* 19(1): 1-24.

Dupré John. 2007. Fact and Value. *In Value-Free Science? Ideals and illusions*, eds. Harold Kincaid, John Dupré, and Alyson Wylie, 27-41. New York: Oxford University Press.

## חטיבה ב: קונצנזוס מדעי

קונצנזוס מדעי משמש כלי אפיסטמי לקבלת החלטות על ידי קובעי מדיניות וכלי פוליטי לקידום השקפות שונות. נדון בטיעונים בעד האמינות של קונצנזוס מדעי ונגדו, ובעמדות ביניים.

6. הטיעון בעד קונצנזוס The Argument for Consensus

**Required:**

Oreskes, Naomi. 2007. The Scientific Consensus on Climate Change: How Do We Know We're Not Wrong? In *Climate Change: What It Means for Us, Our Children, and Our Grandchildren*, eds. Joseph F.C. DiMento and Pamela Doughman, 65–99. Cambridge, MA: MIT Press.

Anderson, Elizabeth. 2011. Democracy, Public Policy, and Lay Assessments of Scientific Testimony. *Episteme* 8(2): 144-164.

**Additional:**

Oreskes, Naomi, Erik M. Conway, Matthew Shindell. 2008. From Chicken Little to Dr. Pangloss: William Nierenberg, Global Warming, and the Social Deconstruction of Scientific Knowledge. *Historical Studies in the Natural Sciences* 38(1): 109-152.

Ranalli, Brent. 2012. Climate Science, Character, and the 'Hard-Won' Consensus. *Kennedy Institute of Ethics Journal* 22 (2): 183–210.

IPCC. 2008. *Appendix A to the Principles Governing IPCC Work: Procedures for the Preparation, Review, Acceptance, Adoption, Approval and Publication of IPCC Reports*. Geneva: IPCC. (לא להצגה)

7. הטיעון נגד קונצנזוס The Argument against Consensus

**Required:**

Beatty, John. 2006. Masking Disagreement among Experts. *Episteme* 3(1): 52-67.

de Melo-Martín, Inmaculada & Kristen Intemann. 2013. Scientific Dissent and Public Policy: Is Targeting Dissent a Reasonable Way to Protect Sound Policy Decisions? *EMBO Reports* 14(3): 231-235.

**Additional:**

Solomon, Miriam. 2007. The Social Epistemology of NIH Consensus Conferences. In *Establishing Medical Reality: Essays in the Metaphysics and Epistemology of Biomedical Science*, eds. Harold Kincaid and Jennifer McKitrick, 167-177. Dordrecht: Springer.

Any Chapter from Rescher, Nicholas. 1993. *Pluralism: Against the Demand for Consensus*. Oxford: Clarendon Press.

Intemann, Kristen & Inmaculada de Melo-Martín. 2014. Are There Limits to Scientists' Obligations to Seek and Engage Dissenters? *Synthese* 91(12): 2751-2765.

Fuller, Steve. 1986. The Elusiveness of Consensus in Science. *PSA 1986*: 106-119.

Halfon, Saul. 2006. The Disunity of Consensus: International Policy Coordination as Socio-Technical Practice. *Social Studies of Science* 36(5): 783-807.

Grebowicz, Margaret. 2005. Consensus, Dissensus, and Democracy: What Is at Stake in Feminist Science Studies? *Philosophy of Science* 72(5): 989-99.

8. <u>גישת ביניים? A Middle-Ground Approach?</u>

**Required:**

נא לקרוא אחד מהשניים:

Miller, Boaz. 2013. When is Consensus Knowledge Based? Distinguishing Shared Knowledge from Mere Agreement. *Synthese* 190(7): 1293-1316.

או:

Miller, Boaz. 2014. Scientific Consensus and Expert Testimony in Courts: Lessons from the Bendectin Litigation. *Foundations of Science*, forthcoming.

**Additional:**

Stegenga, Jacob. 2014. Three Criteria for Consensus Conferences. *Foundations of Science*, forthcoming.

Kosolosky, Laszlo, and Jeroen Van Bouwen. 2014. Explicating Ways of Consensus-Making in Science and Society: Distinguishing the Academic, the Interface and the Meta-Consensus. In *Experts and Consensus in Social Science*, eds. Carlo Martini, & Marcel Boumans, 71-92. Dordrecht: Springer.

Tucker, Aviezer. 2014. Epistemology as a Social Science: Applying the Neyman-Rubin Model to Explain Expert Beliefs. In *Experts and Consensus in Social Science*, eds. Carlo Martini, & Marcel Boumans, 155-170. Dordrecht: Springer.

Beatty, John, and Alfred Moore. 2010. Should We Aim for Consensus? *Episteme* 7(3): 198-214.

Kitcher, Philip. 2011. *Science in a Democratic Society*. Ch. 8: Diversity and Dissent, 193-226. Amherst, NY: Prometheus Books.

**חטיבה ג: מסחור הידע המדעי**

מסחור הידע המדעי – תהליך שמסיבות שונות צבר תאוצה משמעותית בתחילת שנות השמונים – מערער על דגמים מסורתיים של ייצור ידע. נדון ביחסי אקדמיה ותעשייה, ביחסי המחקר הרפואי ותעשיית התרופות, ובהשפעות ההדדיות של חוקי פטנטים, קניין רוחני, ומדע.

9. יחסי אקדמיה ותעשייה Academia-Industry Relations

**Required:**

Kleinman, Daniel L. 2010. The Commercialization of Academic Culture and the Future of the University. In *The Commodification of Academic Research: Science and the Modern University*, ed. Hans Radder, 24-43. Pittsburgh: University of Pittsburgh Press.

**Additional:**

Adam, Matthias. 2008. Promoting Disinterestedness or Making Use of Bias? Interests and Moral Obligation in Commercialized Research. In *The Challenge of the Social and the Pressure of Practice: Science and Values Revisited,* eds. Martin Carrier, Don Howard & Janet Kourany, 235-255. Pittsburgh, PA: University of Pittsburgh Press.

Carrier, Martin. 2008. Science in the Grip of the Economy: On the Epistemic Impact of the Commercialization of Research. In *The Challenge of the Social and the Pressure of Practice: Science and Values Revisited,* eds. Martin Carrier, Don Howard & Janet Kourany, 217-234. Pittsburgh, PA: University of Pittsburgh Press.

10. מדע ניאו-ליברלי Neo-Liberal Science

**Required:**

Mirowski, Philip. 2011. *Science-Mart: Privatizing American Science*. Ch. 7: The New Production of Ignorance: The Dirty Secret of the New Knowledge Economy, 315-350. Cambridge, MA: Harvard University Press.

**Additional:**

מסר-ירון, חגית. 2008. **הקפיטליזם של הידע**. תל-אביב: משרד הביטחון – ההוצאה לאור.

Lave, Rebecca, Philip Mirowski, and Samuel Randalls. 2010. Introduction: STS and Neoliberal Science. *Social Studies of Science* 40(5): 659-675.

Randalls, Samuel. 2010. Weather Profits: Weather Derivatives and the Commercialization of Meteorology. *Social Studies of Science* 40(5): 705-730.

Lawless, Christopher J., and Robin Williams. 2010. Helping with Inquiries or Helping with Profits? The Trials and Tribulations of a Technology of Forensic Reasoning. *Social Studies of Science* 40(5): 731-755.

Evans, James A. 2010. Industry Collaboration, Scientific Sharing, and the Dissemination of Knowledge. *Social Studies of Science* 40(5): 757-791.

11. פטנטים וקנין רוחני Patents and Intellectual Property

**Required:**

Berman, Elizabeth P. 2008. Why Did Universities Start Patenting? Institution-Building and the Road to the Bayh-Dole Act. *Social Studies of Science* 38(6): 835-871.

Biddle, Justin. 2014. Can Patents Prohibit Research? On The Social Epistemology of Patenting and Licensing in Science. *Studies in History and Philosophy of Science* 45: 14-23.

**Additional:**

Timmermann, Cristian. 2014, in press. Pesticides and the Patent Bargain. *Journal of Agricultural and Environmental Ethics*. http://dx.doi.org/10.1007/s10806-014-9515-x

Sterckx, Sigrid. 2010. Knowledge Transfer from Academia to Industry through Patenting and Licensing: Rhetoric and Reality. In *The Commodification of Academic Research: Science and the Modern University*, ed. Hans Radder, 44-64. Pittsburgh: University of Pittsburgh Press.

van den Belt, Henk. 2010. Robert Merton, Intellectual Property, and Open Science: A Sociological History for Our

Times. In *The Commodification of Academic Research: Science and the Modern University*, ed. Hans Radder, 187-230. Pittsburgh: University of Pittsburgh Press.

Mirowski, Philip. 2011. *Science-Mart: Privatizing American Science*. Ch. 4: Lovin' Intellectual Property and Livin' with the MTA, 139-193. Cambridge, MA: Harvard University Press.

Metlay, Grischa. 2006. Reconsidering Renormalization: Stability and Change in 20th-Century Views on University Patents. *Social Studies of Science* 36(4): 565-597.

12. השחתת המדע על ידי תעשיית התרופות The Corruption of Science by Big Pharma

**Required:**

Angell, Marcia. 2009. Drug Companies and Doctors: A Story of Corruption. *New York Review of Books* 56(1): 8-13.

Brown, James R. 2010. One-Shot Science. In *The Commodification of Academic Research*, ed. Hans Raddder, 90-109. Pittsburgh: University of Pittsburgh Press.

**Additional:**

Borgerson, Kirstin. 2013. Are Explanatory Trials Ethical? Shifting the Burden of Justification in Clinical Trial Design. *Theoretical Medicine and Bioethics* 34(4):293-308.

Brown, James R. 2008. The Community of Science®. In The *Challenge of the Social and the Pressure of Practice: Science and Values Revisited*, eds. Martin Carrier, Don Howard & Janet Kourany, 189-216. Pittsburgh, PA: University of Pittsburgh Press.

Mirowski, Philip. 2011. *Science-Mart: Privatizing American Science*. Ch. 5: Pharma's Market, 194-255. Cambridge, MA: Harvard University Press.

13. כתיבת רפאים של מאמרים רפואיים Ghost Writing

**Required:**

Sismondo, Sergio. 2009. Ghosts in the Machine: Publication Planning in the Medical Sciences. *Social Studies of Science* 39(2):171-198.

Kukla, Rebecca. 2012. "Author TBD": Radical Collaboration in Contemporary Biomedical Research. *Philosophy of Science* 79(5): 845-858.

**Additional:**

McHenry, Leemon. 2009. Ghosts in the Machine: Comment on Sismondo. *Social Studies of Science* 39(6): 943-947.

Sismondo, Sergio. 2009. Ghosts in the Machine: Reply to McHenry. *Social Studies of Science* 39(6): 949-952.

Winsberg Eric, Bryce Huebner & Rebecca Kukla. 2014. Accountability and Values in Radically Collaborative Research. *Studies in History and Philosophy of Science* 46: 16-23.

14. ביקורת עמיתים במדע Peer Review

**Required:**

Lee, Carole J. 2013. The Limited Effectiveness of Prestige as an Intervention on the Health of Medical Journal Publications. *Episteme* 10(4): 387-402.

Ryghaug, Marianne and Tomas Moe Skjølsvold. 2010. The Global Warming of Climate Science: Climategate and the Construction of Scientific Facts. *International Studies in the Philosophy of Science* 24(3): 287-307.

**Additional:**

Rekdal, Ole B. 2014. Academic Urban Legends. *Social Studies of Science* 44(4): 638-654.

Lee, C. J., C. R. Sugimoto, G. Zhang, B. Cronin. 2013. Bias in Peer Review. *Journal of the American Society for Information Science and Technology* 64: 2-17.

Lee, Carole J. 2012. A Kuhnian Critique of Psychometric Research on Peer Review. *Philosophy of Science* 79(5):859-870.

McAllister, James W. 2012. Climate Science Controversies and the Demand for Access to Empirical Data. *Philosophy of Science* 79(5): 871-880.

Koepsell, David. 2010. Back to Basic: How Technology and the Open Source Movement Can Save Science. *Social Epistemology* 24(3): 181-190.

**חטיבה ד: מומחיות ודמוקרטיזציה של המדע**

החטיבה תפתח בדיון בבעיית הלגיטימציה הפוליטית והאפיסטמית של ידע מומחי, ותמשיך בדיון בדגמים שונים של יחסי מומחים והציבור המנסים לפתור אותה.

15. הבעיה עם מומחים בתיאוריה ליברלית The Problem with Experts in Liberal Theory

**Required:**

Turner, Stephen. 2001. What is the Problem with Experts? *Social Studies of Science* 31(1): 123–149.

**Additional:**

Kappel, Klemens. 2014. Factual Disagreement and Political Legitimacy. In *Expertise and Democracy*, ed. Cathrine Holst, 141-172. Oslo: ARENA.

Schudson, Michael. 2006. The Trouble with Experts – and why Democracies Need Them. *Theory and Society* 35: 491-506.

Turner, Stephen. 2007. Political Epistemology, Experts and the Aggregation of Knowledge. *Spontaneous Generations* 1(1): 36–47.

Kusch, Martin. 2007. Towards a Political Philosophy of Risk: Experts and Publics in Deliberative Democracy. In *Risk: Philosophical Perspectives*, ed. T. Lewens, 131-155. New York: Routledge.

16. מומחיות ואמון Trust and Expertise

**Required:**

Kutrovátz, Gábor. 2010. Trust in Experts: Contextual Patterns of Warranted Epistemic Dependence. *Balkan Journal of Philosophy* 2(1): 57-68.

הרמן, אורן. 2014. מדע על כיסא הנאשמים: רעידת האדמה שאחרי האסון. **מוסף הארץ** (5 בדצמבר): 49-53.

**Additional:**

Almassi, Ben. 2012. Climate Change, Epistemic Trust, and Expert Trustworthiness. *Ethics & the Environment* 17(2): 29-49.

Collins, Harry & Martin Weinel. 2011. Transmuted Expertise: How Technical Non-Experts Can Assess Experts and Expertise. *Argumentation* 25: 401-413.

Goldman, Alvin. 2001. Experts: Which Ones Should You Trust? *Philosophy and Phenomenological Research* 63(1): 85-111.

Fuller, Steve. 2006. The Constitutively Social Character of Expertise. In *The Philosophy of Expertise*, eds. Evan Selinger & Robert P. Crease, 342-356. New York: Columbia University Press.

Hardwig, John. 1994. Toward an Ethics of Expertise. In *Professional Ethics and Social Responsibility*, ed. Daniel Wueste, 83-101. Lanham, MD: Rowman & Littlefield.

Pierson, Robert. 1994. The Epistemic Authority of Expertise. *PSA: Proceedings of the Biennial Meeting of the Philosophy of Science Association*, Volume One, 398-405.

17. ייצוג דמוקרטי במדע Democratic Representation in Science

Required:

Brown, Mark B. 2012. Who Speaks for the Global Climate? Institutional Pluralism and Democratic Representation. http://wpsa.research.pdx.edu/meet/2012/brown.pdf

Additional:

Any Chapter from Brown, Mark B. 2009. *Science in Democracy: Expertise, Institutions, and Representation*. Cambridge, MA: MIT Press.

Marres, Noortje. 2012. *Material Participation: Technology, the Environment and Everyday Publics*. Ch. 2: The Invention of Material Publics: Returns to American Pragmatism, 28-59. New York: Palgrave Macmillan.

Brown, Mark B. 2006. Survey Article: Citizen Panels and the Concept of Representation. *The Journal of Political Philosophy* 14(2): 203–225.

18. "מדע סדור היטב" (Well-Ordered Science)

Required:

Kitcher, Philip. 2011. *Science in a Democratic Society*. Ch. 5: Well-Ordered Science, 105-138. Amherst, NY: Prometheus Books.

Additional:

Jasanoff, Sheila. 2004. What Inquiring Minds *Should* Want to Know. *Studies in History and Philosophy of Science* 35: 149-157.

Kitcher, Philip. 2001. *Science, Truth, and Democracy*. New York: Oxford University Press.

Keren, Arnon. 2013. Kitcher on Well-Ordered Science: Should Science Be Measured against the Outcomes of Ideal Democratic Deliberation? *Theoria* 77: 233-244.

Longino, Helen E. 2002. Science and the Common Good: Thoughts on Philip Kitcher's *Science, Truth, and Democracy*. *Philosophy of Science* 69(4): 560-568.

Kitcher, Philip. 2002. Reply to Helen Longino. *Philosophy of Science* 69(4): 569-572.

Pinto, Manuela F. forthcoming. Commercialization and the Limits of Well-Ordered Science. *Perspectives on Science*. http://www3.nd.edu/~mfernan3/Paper%20Kitcher.pdf

19. "פלורליזם שילובי" (Integrative Pluralism)

Required:

Mitchel, Sandra F. 2009. *Unsimple Truths: Science, Complexity, and Policy.* Ch. 5: Policy: How We Act in the World; Ch. 6: Integrative Pluralism, 85-129. Chicago: University of Chicago Press.

Additional:

Mitchell, Sandra D. 2004. Why Integrative Pluralism? *Emergence: Complexity and Organization* 6(1-2): 81-91.

Parker, Wendy S. 2006. Understanding Pluralism in Climate Modeling. *Foundations of Science* 11(4): 349-368.

Van Bouwel, Jeroen. 2009. The Problem With(out) Consensus: The Scientific Consensus, Deliberative Democracy and Agnostic Pluralism. In *The Social Sciences and Democracy*, ed. Jeroen Van Bouwel, 121-142. New York: Palgrave Macmillan.

Kitcher, Philip. 2002. The Third Way: Reflections on Helen Longino's *The Fate of Knowledge*. *Philosophy of Science* 69(4): 549-559.

Longino, Helen E. 2002. Reply to Philip Kitcher. *Philosophy of Science* 69(4): 573-577.

**חטיבה ה: מפנה המדיניות (Policy Turn) ב-STS וב-HPS**

בשנים האחרונות חוקרי STS ו-HPS מוצאים עצמם יותר ויותר בעמדת ייעוץ, המלצה, וקבלת החלטות, להבדיל מעמדת החוקר הלא מעורב. עמדה חדשה זו מעלה בעיות מתודולוגיות ונורמטיביות, שבהן עוסקת חטיבה זו.

20. <u>פילוסופיה של המדע רלוונטית חברתית (SRPOS)</u>

**Required:**

Fehr, Carla, and Kathryn S. Plaisance. 2010. Socially Relevant Philosophy of Science: An Introduction. *Synthese* 177(3): 301-316.

Giere, Ronald N. 2012. A New Program for the Philosophy of Science? *Perspectives on Science* 20(3): 339–343.

**Additional:**

Any Paper from *Synthese* 177(3), 2010: Making Philosophy of Science More Socially Relevant.

Kourany, Janet A. 2010. *Philosophy of Science after Feminism*. Ch. 5: The Prospects of Philosophy of Science in the Twenty-First Century, 105-128. Oxford: Oxford University Press.

Elliot, Kevin. 2011. *Is a Little Pollution Good for You? Incorporating Societal Values in Environmental Research*. Ch. 6: Lesson #3: Ethics for Experts, 132-159. New York: Oxford University Press.

Giere, Ronald N. 2003. A New Program for Philosophy of Science? *Philosophy of Science* 70(1): 15-21.

21. <u>"ייצור משותף" (Co-production)</u>

**Required:**

Jasanoff, Sheila. 1996. Beyond Epistemology: Relativism and Engagement in the Politics of Science. *Social Studies of Science* 26(2): 393-418.

**Additional:**

Any paper from Jasanoff, Sheila, ed. 2004. *States of Knowledge: The Co-production of Science and the Social Order*. London: Routledge.

Any paper from Jasanoff, Sheila. 2007. *Designs on Nature: Science and Democracy in Europe and the United States*. Princeton: Princeton University Press

Ezrahi, Yaron. 2008. Controlling Biotechnology: Science, Democracy and 'Civic Epistemology'. *Metascience* 17(2): 177-198.

Jasanoff, Sheila. 1991. Acceptable Evidence in a Pluralistic Society. In *Acceptable Evidence: Science and Values in Risk Management*, ed. Deborah G. Mayo and Rachelle D. Hollander, 29-47. New York: Oxford University Press.

22. <u>"מודרניזם מבחירה" (Elective Modernism)</u>

**Required:**

Collins, Harry, Martin Weinel, and Robert Evans. 2010. The Politics and Policy of the Third Wave: New Technologies and Society. *Critical Policy Studies* 4(2): 185-201.

Weinel, Martin. 2007. Primary Source Knowledge and Technical Decision-Making: Mbeki and the AZT Debate. *Studies in History and Philosophy of Science* 38(4): 748–760.

:Additional

Durant, Darrin. 2011. Models of Democracy in Social Studies of Science. *Social Studies of Science* 41(5) 691-714

Hamlin, Christopher. 2008. Third Wave Science Studies: Toward a History and Philosophy of Expertise. In *The Challenge of the Social and the Pressure of Practice: Science and Values Revisited*, eds. Martin Carrier, Don Howard & Janet Kourany, 160-185. Pittsburgh, PA: University of Pittsburgh Press.

Collins, Harry. 2010. Elective Modernism. *Cardiff School of Social Sciences*. http://www.cardiff.ac.uk/socsi/contactsandpeople/harrycollins/expertise-project/elective%20modernism%204.doc

Any paper from Collins, Harry, ed., 2007. Case Studies of Expertise and Experience (Special Issue). *Studies in History and Philosophy of Science* 38(4).

23. אנשי STS בזירה הציבורית Public Engagement of STS Scholars

:Required

Fuller, Steve. 2006. *The Philosophy of Science and Technology Studies*. Ch. 6: Citizen Science: Cultivating Life in STS, 157-180. London: Routledge.

:Additional

Fuller, Steve. 2008. Science Studies Goes Public: A Report on an Ongoing Performance. *Spontaneous Generations* 2(1): 11-21.

Lynch, Michael. 2009. Going Public: A Cautionary Tale. *Spontaneous Generations* 3(1): 213-219.

Fuller Steve. 2009. Response to Lynch. *Spontaneous Generations* 3(1): 220-222.

Holbrook, J. Britt. 2013. Fuller's Categorical Imperative: The Will to Proaction. *Social Epistemology Review and Reply Collective* 2 (11): 20-26. http://wp.me/p1Bfg0-13K

**ג. חובות הקורס:**

**דרישות קדם: אין**

**חובות / דרישות / מטלות:**

נוכחות והשתתפות פעילה בשיעורים, קריאה שוטפת משמעותית, הצגת 2 רפרטים של אחד ממאמרי הרשות לשיעור בני כ-15 דקות כל אחד, והגשת עבודת סיכום (כ-4,500 מילים) המכילה טיעון מחקרי מקורי. הציון הסופי יינתן כציון מספרי.

**מרכיבי הציון הסופי (ציון מספרי / ציון עובר):**

2 רפרטים : 30%.

עבודת סיום : 70%.